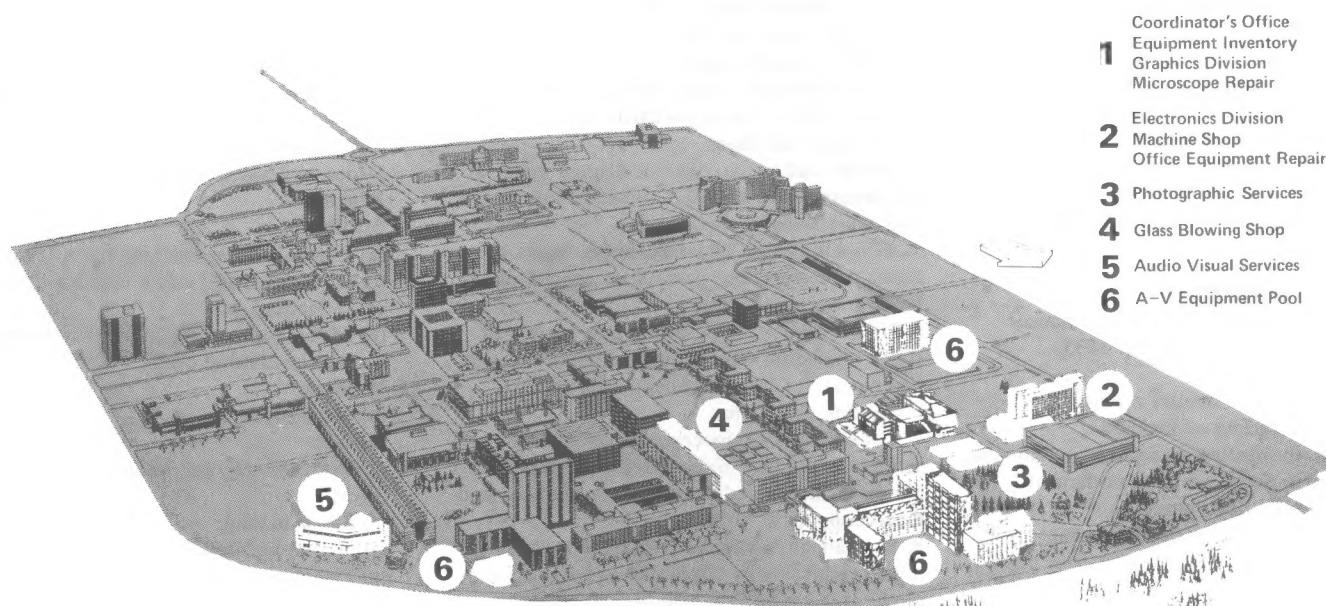


# FOLIO

THE UNIVERSITY OF ALBERTA STAFF BULLETIN

EDMONTON, ALBERTA

5 JANUARY 1978



- 1 Coordinator's Office  
Equipment Inventory  
Graphics Division  
Microscope Repair
- 2 Electronics Division  
Machine Shop  
Office Equipment Repair
- 3 Photographic Services
- 4 Glass Blowing Shop
- 5 Audio Visual Services
- 6 A-V Equipment Pool

## TECHNICAL SERVICES

The Department of Technical Services provides a variety of services to all University departments. Technical Services consists of nine divisions, and the services of each are listed below.

### AUDIOVISUAL SERVICES

Supervisor: J. DeWacht, phone 1183.  
Equipment requests to: L2-6 Humanities, phone 3923 or 1183. Equipment may also be picked up at 339 General Services Building, 1261; CW005 Biological Science Building, 4962; and LB-9 Tory Building.

#### Services available

1. Supplying audiovisual equipment to departments.
2. Projectionist services.
3. L2-6 Humanities has 50 study carrels variously equipped with audio cassette players, film strip units, sound/slide units, and video cassette players. Audio cassettes, film strips, slide/tape programs and video cassettes may be left in the tape library in L2-6 Humanities where students and/or staff can draw the tapes and play them in the carrels.
4. The Reserve Reading Room in Cameron Library is equipped with slide/tape and video cassette units for use by staff and students. Tapes may be deposited in the Reading Room.

5. Operation of public address and sound systems.

6. Setting up and operating of recording equipment at lectures, seminars, talks, etc.

7. Advice and assistance on purchase of equipment.

8. Assistance in developing slide/tape programs.

#### Equipment available for short-term loan

1. 35mm slide projectors.
2. 16mm motion picture projectors (sound) including the following special projectors:
  - (a) 16mm projector (silent) variable speed; slowest frame rate is 13 per second,
  - (b) 16mm projector (photo data optical analyzer) which will project at the following frame speeds: 1, 2, 4, 6, 8, 12, 16, and 24 frames per second with no flicker,
  - (c) 16mm projector (magnetic sound).
3. 3¼ x 4½ slide projectors.
4. Opaque projectors.
5. Filmstrip projectors.
6. Overhead projectors.
7. Tape recorders (several kinds, including battery-operated and cassette recorders).
8. Portable public address systems.
9. Projection screens.
10. Record players.
11. Slide-tape synchronizing systems.

### DATA ACQUISITION AND INTERFACING

W. Sherrard—Electronics Division, 248

Chemical-Mineral Engineering Building, 4901.

#### Services available

1. Design and construction of systems for data acquisition.
2. Design and construction of interfaces for mini-computers.
3. Conversion of analog to digital data for computer processing.
4. Assistance with purchasing of above type of equipment.
5. Rental of data acquisition systems.
6. A data acquisition systems has been developed comprising a PDP 11-20 computer, an IBM compatible tape unit, ASR 33 teletype and high speed reader/punch. Software and various hardware support are available. Total system is either for loan or for data conversion in-house.
7. Design and construction of F8 micro-computer based data acquisitions systems.

### ELECTRONICS

Supervisor: W. Diachuk. Assistant Supervisor: B. Acheson, 248 Chemical-Mineral Engineering Building, 4901.

#### Services available

1. Designing and building specialized electronic equipment.
2. Maintenance and repair of equipment such as sterilizers, glassware washers, environmental chambers, centrifuges, spectrometers, pH meters, liquid scintillation systems, gas

chromatographs, computers, teletypes, tape recorders and electronic instrumentation in general. (A regular preventive maintenance program is available to any department. Service contracts are available.)

3. Electronics technicians are available on either full-time or part-time basis for short or long periods of time.
4. Advice and assistance on technical problems.
5. Servicing intercom installations and sound systems.
6. A considerable amount of electronic equipment is available for loan.
7. Complete fabrication of printed circuit boards, single and double sided.
8. Design and construction of F 8 microcomputer process controls.
9. Facilities available for programming a variety of programs.

#### **EQUIPMENT INVENTORY**

Supervisor: L.C. Stodgell, 6-29 Mechanical Engineering Building, telephone 5835.

##### *Services available*

1. Provision of departmental reports of equipment in a variety of formats.
2. Assistance in locating equipment on campus.
3. Assistance in determining custodian of misplaced or stolen equipment.
4. Assistance in updating departmental equipment inventory records.

#### **GLASSBLOWING**

Supervisor: P.B. Lea, WB39 Chemistry Building, west wing, 3513.

##### *Services available*

1. Design and construction of specialized scientific glass apparatus.
2. Repair of glass apparatus.
3. Fabrication of apparatus to your specifications.

#### **GRAPHICS**

Supervisor: R.W. Miller. Assistant

Supervisor: N.G. Moroskat, 4-31 Mechanical Engineering Building, 3461 or 4184.

##### *Services available*

1. Presentation of graphical data for inclusion in publications, reports, theses, slides, television, and motion pictures.
2. Preparation of illustrative material including technical illustrations, architectural renderings, and free hand sketches.
3. Production of visual instructional materials, such as overhead transparencies (in black and white or color), television cards, flip charts, and wall maps.
4. Design and preparation of display material for departmental display cabinets, conferences, and exhibitions.
5. Graphic design of labels, signs, logos, brochure covers, and posters for special or limited run applications.
6. IBM Composer typesetting in a variety of styles (including Greek and mathematical typefaces), for publications, theses, reports, brochures, and slides.
7. Graphic and engineering reproduction services, including: direct positive line prints, for publications and theses, line negatives, and diazo copying on film and paper.
8. Permanent and temporary signage and label production by silkscreen and signpress methods, on a variety of materials (paper, cardboard, acetate, vinyl, etc.).
9. Complete conference programs designed and produced including such items as brochures, posters, directional signage, name tags, menus, advertisements, printed binders, and T-shirts.
10. Large dry-mounting facilities for items up to 4 feet x 4 feet as well as plastic laminating in a variety of sizes.
11. Advice and assistance regarding visual instructional materials and graphic standards.
12. Signage—The campus signage program is being coordinated through the Graphics Division in cooperation with Campus Development. Design, production, and installation of temporary, permanent, and safety signage is handled through Graphics. Advice and assistance in setting up signage programs for conferences and other related projects is also available. Telephone 3461.

#### **MACHINE SHOP**

Supervisor: E.F. Eichenlaub. Assistant

Supervisor: G.L. Edwards, 132 Chemical-Mineral Engineering Building, 4901.

##### *Services available*

1. Design and construction of specialized apparatus and equipment.
2. Complete shop service: machining, fabricating, and welding.
3. Service and repair of mechanical apparatus and equipment.
4. Advice and assistance on proposed projects.

5. Advice and assistance on proposed equipment.

6. Modification of equipment and machines. *Equipment is available to do the following:*

1. Sawing
  - (a) Band saw—36-inch throat—depth capacity to 12 inches—contouring to 36 inches in diameter—band filing
  - (b) Cut-off saw—circular capacity to 12 inches
2. Turning
  - (a) largest lathe has a capacity of 13 feet between centres with a swing of 25 inches over bed and 52-inch swing in gap
3. Drilling and boring—radial drill has a 5-foot arm and drilling capacity in steel of 3 inches
4. Milling
  - (a) largest milling machine has a table travel of 60 inches and a ram travel (cross) of 27 inches
  - (b) Moog 3-axis point to point numerical control machining centre
5. Welding
  - (a) Oxyacetylene
  - (b) Arc
  - (c) Tig. 500 amp maximum
  - (d) Mig
  - (e) Silver brazing
  - (f) plasma needle arc
  - (g) Plasma arc cutting (stainless steel and aluminum)
6. Fabricating
  - (a) Power shearing 10 ft. x ¼ in. capacity
  - (b) Press brake 12 ft. die surface, 110 ton capacity
  - (c) Hand brake, 4 ft.
  - (d) Punching and notching on "Iron-worker"
  - (e) Bending on a "Dioco" number 8 power bender, ¾ in. x 4 in. flat and 1¼ in. mild steel bar capacity
  - (f) "Pioneer" nibbler, ½ in. capacity
7. Grinding and lapping
  - (a) "Norton" tool and cutter grinder
  - (b) Lapping machine, 5 in. diameter capacity
8. Gauging
  - (a) "Scherr-Tumico" model P1600 Optical Comparator with photo print facility
  - (b) Registered Double "A" standard surface plate and gauge blocks in temperature-controlled room
9. Polishing
  - (a) Mechanical buffing
  - (b) Electro-polishing
  - (c) Anodizing
  - (d) Bluing
10. Shot-blasting—Shot-blast machine has a chamber size of 48 in. x 30 in. x 38 in.

#### **MICROSCOPE REPAIR**

Supervisor: R.J. Cunningham, 4-22

Mechanical Engineering Building, 2449.

# FOLIO

THE UNIVERSITY OF ALBERTA, EDMONTON, ALBERTA

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Jeanette Rothrock, Editor

##### *FOLIO Advisory Committee*

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J.K. Lauber, Professor of Zoology and Associate

Vice-President (Academic)

A.S. Knowler, Business Manager, Chief Accountant, Office of the Comptroller

Staff: David Chester, Chris Simpson, Bryan Moon (Writers), Sue Nash (Design Editor), Esther Fraser (Production)

##### **FOLIO OFFICE**

434 Athabasca Hall, The University of Alberta

Printed by Printing Services

Photographic lab work by Technical Services

Telephone 432-4991

#### *Services available*

1. Maintenance and repair of microscopes.
2. Maintenance and repair of balances.
3. A preventive maintenance program is available to any department wishing regular servicing of microscopes and/or balances.
4. Repair of electrical meters (movements only)—voltmeters, ammeters, etc.
5. Maintenance and repair of field surveying equipment.

#### **OFFICE EQUIPMENT REPAIR**

Supervisor: D. Millar, 130 Chemical-Mineral Engineering Building, 4901.

#### *Services available*

1. Maintenance and repair of
  - (a) all makes of electrical and mechanical typewriters
  - (b) all makes of dictation equipment and small tape recorders
  - (c) all makes of mechanical adding machines and calculators
  - (d) some lines of electronic calculators (Where we are unable to service electronic calculators, we will handle the servicing through the distributor if the department wishes.)
  - (e) spirit duplicators
  - (f) small photocopy machines
  - (g) microfilm readers and printers
  - (h) small office accessories

2. Loan machines available for many makes while your machines are being repaired.
3. Machines available for rent.
4. IBM type element repair.

#### **PHOTOGRAPHIC SERVICES**

Supervisor: D. Cox, 106 Temporary Lab Building, 4185 or 4186.

#### *Services available*

1. Original photography—prints and slides in black and white and in color.
2. Copy work—prints and slides in black and white and in color.
3. Production of superior quality black and white prints using an electronic scanning enlarger.
4. Studio portraits, passports, visa, and application photographs in colour and black and white.
5. Photomicrography, microphotography, macrophotography.
6. Specialized scientific and medical photography.
7. Murals.
8. Microfilming.
9. Film processing and printing in black and white and in color.
10. Camera and accessory rentals.
11. Motion Pictures (telephone 3812)
  - (a) Complete film production services: research, educational, documentary,

dramatic; in color, black and white, silent or sound

(b) Film completion services: assistance in completing your own film to any extent you require

(c) Camera rentals: 16mm Bolexes with 17-85mm zooms, Super 8 Canon model 814s (reservations usually required)

(d) Specialized services available—photographic setups for research, time lapse, cinemicrographic data recordings, high speed camera operation, still pictures from films, sound and picture editing and synchronizing

(e) Film processing services

(f) Large file of motion picture technical and product information, and advice.

#### **TECHNICAL SERVICES**

##### **TELEPHONE DIRECTORY**

Coordinator: W.H. Jopling, 6-29 Mechanical Engineering Building, 3302.

Audiovisual Services 3923

Electronics 4901

Equipment Inventory 5835

Glassblowing 3513

Graphics 3461 or 4181

Machine Shop 4901

Microscope Repair 1449

Office Equipment Repair 4901

Photo Services 4185 or 4186

Motion Pictures 3912

#### **METRIC NOTES**

In SI (*Système International d'Unités*), established in 1960, areas of surfaces are calculated according to the square metre ( $\text{m}^2$ ) and its multiples; the square kilometre ( $\text{km}^2$ ), the square hectometre ( $\text{hm}^2$ ), the square decimetre ( $\text{dm}^2$ ), the square centimetre ( $\text{cm}^2$ ), and the square millimetre ( $\text{mm}^2$ ).

Thus,

1  $\text{km}^2$  is the equivalent of 1 000 000  $\text{m}^2$ ,

1  $\text{hm}^2$  is the equivalent of 10 000  $\text{m}^2$ ,

1  $\text{dm}^2$  is the equivalent of 0.10  $\text{m}^2$ ,

1  $\text{cm}^2$  is the equivalent of 0.01  $\text{m}^2$ ,

1  $\text{mm}^2$  is the equivalent of 0.001  $\text{m}^2$ .

In the *Metric Style Guide*, published by the Council of Ministers of Education, Toronto (1975), examples of areas in SI have been given. For example, the area of Canada is 9 976 140  $\text{km}^2$ , that of the Canadian Parliament Buildings is 14  $\text{hm}^2$ , of a 9 feet by 12 feet rug is 10  $\text{m}^2$ , of a twelve inch long-playing record is 7  $\text{dm}^2$ , of a dollar bill 1  $\text{dm}^2$ , of a Social Insurance card 45  $\text{cm}^2$ , of the hole in the dial of a telephone 1  $\text{cm}^2$ , and of the hole in a well-known brand of candy similar in shape to a lifebuoy 1  $\text{cm}^2$ .

## EARL W. BUXTON 1910 to 1977

Earl Buxton, Professor Emeritus of Secondary Education, died in Palm Springs, California on Tuesday, 20 December.

Professor Buxton was a member of he University's teaching staff for twenty years prior to his retirement in 1976. He received his Teaching Certificate from Camrose Normal School in 1929; in 1941 he received a BA and in 1948 a BEd from the University of Alberta. In 1954 he received an MA from the University of Washington and 1958 a PhD from Stanford University.

From 1926 to 1936 he taught in rural schools in Alberta; until 1941 he was a high school principal in Radway and Fort Saskatchewan. He taught in various Edmonton high schools until 1948, when he joined the Faculty of Education at the Calgary campus of the University of Alberta; he was Provost at that campus from 1949 until 1954. He joined the Faculty of Education at the Edmonton campus in 1956.

Professor Buxton was an honorary life member of the Alberta Council of Teachers of English and a member of several other teaching associations, including the Alberta Teachers' Association, the Canadian Association of Teachers of English, and the National Council of Teachers of English. From 1956 until 1966 he was a member of the provincial curriculum committee on high school English. He was a member of the Edmonton Public School Board from 1963 until 1968 and Chairman of the Board in 1968.

Professor Buxton wrote and edited several teacher reference and high school textbooks in English and language, and also wrote a number of articles for education journals on teaching English, composition, and literature.

At present, the family does not intend to hold a memorial service in Edmonton; contributions may be sent, however, to an Earl W. Buxton memorial scholarship in the teaching of English, in care of the Faculty of Education.

## NATIVE AFFAIRS ASSISTANT ASSUMES DUTIES

Edmund S. Metawabin has been appointed assistant to the native affairs advisor, Marilyn Buffalo MacDonald. Mr. Metawabin is a graduate of the native studies program at Trent University and a former counsellor of native students at that university. He also brings to his new position the experience gained through four years as an instructor at Ontario's Northern College of Applied Arts and Technology.

Mr. Metawabin assumed his duties at the University at the beginning of December. He pointed out that his first impression of the services provided for native students at this

University are a little behind those provided at some other universities. He added that any steps taken to improve the services must be rooted in the needs felt by the local native community.

Because of his academic and student counselling experience, Mr. Metawabin expects that he will be responsible for most of the counselling, leaving Mrs. MacDonald more time for community-university liaison activities.

He noted that the average age of the native students at the University is higher than that at the institutions with which he is more familiar, and he anticipates that much of his work will involve helping mature students find accommodation and financial assistance.

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## BOOKS

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- *The Blood and Fire in Canada: A History of the Salvation Army in the Dominion, 1882-1976*, by R.G. Moyles, Associate Professor of English, has been published by Peter Martin Associates, Toronto.
- John King-Farlow, Professor of Philosophy, and Yvon Lafrance, Professor Titulaire, Faculté de Philosophie, Université d'Ottawa, are co-editors of the series "L'univers de la philosophie" for Les Editions Bellarmin, Montréal, and for Desclée, Paris-Tournai. The sixth volume in this series, *Philosophie et pluralisme*, has recently been published.

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## PEOPLE

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- D.J. Engel of the Department of Secondary Education recently addressed the Mother's Auxiliary of the Talmud Torah on "Sex and violence on television and its effects on children." Dr. Engel also conducted two workshops at the Alberta Agriculture Conference "I.D.E.A. 77" which was held in Banff from 5 to 9 December. The workshops involved the use of cameras and graphic techniques.
- Abram G. Konrad, Coordinator of the Centre for the Study of Postsecondary Education, conducted a forum on "Training opportunities for college faculties and administrators" at the annual conference of the Association of Canadian Community Colleges that took place in Edmonton from 5 to 8 November.
- Gwynn Nettler, Professor of Sociology, participated in a two-day conference last month concerning the "refractory prisoner." The meeting was held in the Academy for Contemporary Problems at the Ohio State University and was addressed to new ideas for responding

to offenders who are violent outside and inside prisons.

■ R.T. Berg, Chairman of the Department of Animal Science, attended the Canadian Committee of University Biology Chairmen's (CCUBC) annual meeting, from 3 to 6 November. He was invited to sit on a panel "Frontiers in applied Biology," and the paper he presented was titled "Animal Agriculture."

■ J.M. Small and A.G. Konrad, Professors of Educational Administration, conducted a session on "Institutional Renewal" at the annual conference of the Association of Canadian Community Colleges which took place from 5 to 8 November in Edmonton.

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## NOTICES

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*Notices must reach the Editor by 9 a.m. the Thursday prior to publication. Written notification is necessary.*

### Dental Hygiene Clinic

The School of Dental Hygiene is accepting adults and children for oral prophylaxis (teeth cleaning). There will be a nominal fee. For appointments please telephone 432-4151.

### Machining and Fabricating

The workload in the Technical Services machining and fabricating shop is low. Any work that can be given to the shop can be done very promptly and would be much appreciated.

### Lister Complex Reminder

The Department of Housing and Food Services wishes to remind faculty, staff, and students that the Complex will not be available for conferences, meetings, meal service, and accommodation during the period from 1 July 1978 to 31 August 1978. During this time Lister Complex will become the site of the "Games Village."

### Sport, Physical Education and Recreation Conference

A conference, now being organized by the Faculty of Physical Education and Recreation and the Canadian Association of Health, Physical Education and Recreation, will take place in Edmonton next summer. The Sixth Commonwealth Conference on Sport, Physical Education and Recreation will be held from 31 July to 2 August, immediately prior to the XI Commonwealth Games.

The conference is designed to afford an opportunity for people interested in sport, physical education, and recreation to share ideas, techniques, and research findings. The theme for the Edmonton conference is "participation for all in sport, physical education, and recreation." Five areas of interest will be dealt with: administration, coaching, professional preparation, adaptive

programs for special groups, and women's programs. Delegates from all Commonwealth countries are expected to attend.

#### **African Art**

The Faculty of Library Science is pleased to announce the availability of a special collection dealing with African art.

The collection consists of over 1,200 books and pamphlets published in North America, Europe, and Africa. It also contains over 5,000 photographic prints and transparencies of African art, including slides of various social and religious ceremonies.

It is hoped that the collection will serve as a tool for instruction in the acquisition, cataloguing, and classification of special materials. In addition, the collection will provide research material for scholars and students interested in African art.

The collection is being developed and is administered by A. Nitecki, Professor in the Faculty of Library Science. Professor Nitecki, in addition to his regular duties, is Chairman of the CUSO committee and also teaches occasional courses in African art. Professor Nitecki lived for fourteen years in Africa, during which time he taught at three African universities.

People who wish to gain further information concerning this valuable collection should contact Professor Nitecki at the Faculty of Library Science, University of Alberta, T6G 2J4.

#### **English-German Bilingual Education**

Upon the initiative of interested parent groups, the Association for English-German Bilingual Education has been formed. The Association has set as its objective the establishment of a bilingual school program from kindergarten through grade six with German as a second language. The kindergarten class would be conducted almost entirely in German, and the regular school instruction would be carried out in German for about fifty percent of the time.

The Edmonton Public School Board is willing to start such a program at the kindergarten level in the fall of 1978. Given the required minimum of about one hundred students, four schools are likely to be selected. The Association, in its function as a lobby for parents who want to offer their children a bilingual education, is engaged in solving the remaining organizational problems and expects to be able to submit a list of about one hundred names to the School Board by 1 March 1978.

For further information regarding the Association and its activities contact Mrs. Stack, telephone 459-6849, Mrs. Hauf, telephone 466-9086, Mrs. Bruchovski, telephone 436-0466, or Mrs. Gudenburg, telephone 452-1575.

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## **THIS WEEK AND NEXT**

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*Listings must reach the Editor by 9 a.m. Thursday one week prior to publication. Written notification is preferred.*

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### **5 JANUARY, THURSDAY**

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#### **Contemporary Dance Theatre**

8 p.m. The Alberta Contemporary Dance Theatre. Students' Union Theatre. Admission is \$5. Tickets available at the HUB Box Office, Mike's Ticket Office, Woodward's, and at the door.

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### **6 JANUARY, FRIDAY**

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#### **Faculty Club**

*Downstairs.* Friday special: prime rib of beef, baked ham, potatoes, vegetables, salad bar, dessert. \$5.50 per person.

*Upstairs.* Daily special: cream of broccoli soup, waldorf salad, chicken breast veronique, rosette potatoes, beans amandine, black forest cake. \$7.95 per person. Also lobster thermidor, \$15, and regular dinner menu. Reservations required.

#### **Contemporary Dance Theatre**

8 p.m. The Alberta Contemporary Dance Theatre. Students' Union Theatre. Admission is \$5. Tickets available at the HUB Box Office, Mike's Ticket Office, Woodward's, and at the door.

#### **Edmonton Recorder Society**

8 p.m. Guest speaker Violet Archer will discuss the fugue, followed by performances of fugues. For further information telephone 467-1402.

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### **7 JANUARY, SATURDAY**

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#### **Faculty Club**

*Downstairs.* Buffet: lamb shish kebab, fruit rice, vegetable, salad bar, dessert. \$5.50 per person.

*Upstairs.* Lobster thermidor, \$15, and regular dinner menu. Reservations required.

#### **Contemporary Dance Theatre**

8 p.m. The Alberta Contemporary Dance Theatre. Students' Union Theatre. Admission is \$5. Tickets available at the HUB Box Office, Mike's Ticket Office, Woodward's, and at the door.

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### **8 JANUARY, SUNDAY**

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#### **Jazz Concert Series**

2:30 p.m. Big Band Sound. Centennial Library Theatre. Admission is free.

#### **British Comedy Series**

4 p.m. and 7 p.m. *Doctor at Large*. Starring Dirk Bogarde. Provincial Museum. Admission is free.

#### **National Film Theatre**

7 p.m. *Ich Dachte Ich Wäre Tot/I Had a*

*Feeling I Was Dead* (Germany, 1973). Zeidler Hall, Citadel Theatre. Admission is \$2.50 regular, and \$2 for students and senior citizens.

#### **Student Cinema**

7 p.m. and 9:30 p.m. *New York, New York* (United States, 1977). Directed by Martin Scorsese and starring Robert De Niro and Liza Minnelli. Students' Union Theatre. Admission is \$1.50 advance and \$2 at the door. Tickets available at the HUB Box Office.

#### **Hockey**

7:30 p.m. The Golden Bears versus the Saskatchewan Huskies. Varsity Arena. Admission is \$2.50 for adults, \$1.50 for students, and \$1 for children.

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### **9 JANUARY, MONDAY**

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#### **Amnesty International**

8 p.m. The regular meeting of Amnesty International. 129 Education South.

#### **Hockey**

8 p.m. The Golden Bears versus the Saskatchewan Huskies. Varsity Arena. Admission is \$2.50 for adults, \$1.50 for students, and \$1 for children.

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### **10 JANUARY, TUESDAY**

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#### **Civilisation Series (9)**

12:30 p.m. *Bach, Handel, Mozart, The Rococo*. L-3 Humanities Centre.

#### **Student Cinema**

7 p.m. *All Screwed Up* (Italy, 1974) and *Love and Anarchy* (Italy, 1974). Directed by Lina Wertmuller. Students' Union Theatre. Admission is \$2 advance and \$2.50 at the door. Tickets available at the HUB Box Office.

#### **National Film Theatre**

8 p.m. *Mutter Krausens Fahrt Ins Glück/Mother Krause's Journey Into Happiness* (Germany, 1929). Centennial Library Theatre. Admission is \$2.50 regular and \$2 for students and senior citizens.

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### **11 JANUARY, WEDNESDAY**

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#### **Civilisation Series (9)**

12 p.m. *Bach, Handel, Mozart, The Rococo*. L-3 Humanities Centre.

#### **Student Cinema**

7 p.m. and 9:30 p.m. *The Music Lovers* (Great Britain, 1970). Directed by Ken Russell and starring Glenda Jackson and Richard Chamberlain. Students' Union Theatre. Admission is \$1.50 advance and \$2 at the door. Tickets available at the HUB Box Office.

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### **12 JANUARY, THURSDAY**

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#### **Cinematheque 16**

7:30 p.m. *Between Time and Timbuktu* (United States, 1972). Directed by Fred Barzyk and

starring Bob Elliot and Ray Goulding. Downstairs, Edmonton Art Gallery. Admission is \$2 for members and \$2.50 for non-members. Tickets available at the door.

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### 13 JANUARY, FRIDAY

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#### **Wrestling**

Alberta Invitational. West Gym. Admission is free.

#### **Faculty Club**

*Downstairs.* Friday special: prime rib of beef, baked ham, potatoes, vegetable, salad bar, dessert. \$5.50 per person.

*Upstairs.* Daily special: grand marmite, caesar salad, filet steak milady, chateau potatoes, baby carrots, coup au jubilee. \$7.95 per person. Also regular dinner menu. Reservations required.

#### **Basketball**

University of Alberta versus the Calgary Dinosaurs (Pandas at 6:45 p.m. and Bears at 8:30 p.m.) Main Gym. Admission is \$2.50 for adults, \$1.50 for students, and \$1 for children.

#### **Cinematheque 16**

7:30 p.m. *Between Time and Timbuktu* (United States, 1972). Directed by Fred Barzyk and starring Bob Elliot and Ray Goulding. Downstairs, Edmonton Art Gallery. Admission is \$2 for members and \$2.50 for non-members. Tickets available at the door.

#### **Jesse Winchester**

8 p.m. and 10 p.m. Jesse Winchester in concert. Students' Union Theatre. Admission is \$5.50. Tickets available at the HUB Box Office, Mike's Ticket Office, Woodward's, and at the door.

#### **Edmonton Symphony Orchestra**

8:30 p.m. The Edmonton Symphony Orchestra performs with Garrick Ohlsson, pianist. Jubilee Auditorium. For ticket information contact the Symphony Box Office, telephone 433-2020.

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### 14 JANUARY, SATURDAY

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#### **Wrestling**

Alberta Invitational. West Gym. Admission is free.

#### **Gymnastics**

3 p.m. to 11 p.m. The Edmonton All-Stars. Main Gym. Admission is free.

#### **Faculty Club**

*Downstairs.* Buffet: mixed grill, potato, vegetable, salad bar, dessert. \$5.50 per person. *Upstairs.* Malanka Festival (no regular dining). \$17.50 per person. Reservations required. Entertainment: The Crusaders.

#### **Basketball**

University of Alberta versus the Calgary Dinosaurs (Pandas at 6:45 p.m. and Bears at 8:30 p.m.) Main Gym. Admission is \$2.50 for adults, \$1.50 for students, and \$1 for children.

#### **Student Cinema**

7 p.m. and 9:30 p.m. *Joseph Andrews* (Great Britain, 1977). Directed by Tony Richardson and starring Ann Margaret and Peter Firth. Students' Union Theatre. Admission is \$1.50 advance and \$2 at the door. Tickets available at the HUB Box Office.

#### **Edmonton Symphony Orchestra**

8:30 p.m. The Edmonton Symphony Orchestra performs with Garrick Ohlsson, pianist. Jubilee Auditorium. For ticket information contact the Symphony Box Office, telephone 433-2020.

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### EXHIBITIONS AND PLAYS

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#### **Edmonton Art Gallery**

*From 6 January.* "The Bowman Years," an exhibition of the work acquired by the Gallery under the directorship of Maude Bowman. *Continuing.* An exhibition of the works of Edmonton artist Terrence Keller. *Continuing.* "Christmas Show," an exhibition of works on a Christmas theme from the permanent collection.

#### **Centennial Library**

*Continuing.* An exhibition of watercolors by Vera Riasonova-Sell. Foyer Gallery. *Continuing.* An exhibition of black and white photographs by local artist Dale Giaque. Photography Gallery.

#### **University Art Gallery and Museum**

*From 10 January.* "Architectural Concepts for a New National Gallery," ten models and architectural drawings of submissions made for a new National Gallery.

#### **Provincial Museum**

*Continuing.* "Nature and the Artist—Ralph Carson," a cross-section of work by museum habitat artist Ralph Carson. *Continuing.* "Magic," an exhibit examining magic through the ages. *Continuing.* An exhibition of documents illustrating the first eleven seasons of the Citadel Theatre including programs, publicity material, correspondence, working scripts, and financial reports.

#### **Rice Gallery**

*From 12 January.* An exhibition of the paintings of Harry Wohlfarth. Citadel Theatre.

#### **Theatre 3**

*From 12 January.* Friedrich Durrenmatt's *Play Strindberg*. For ticket information and show times contact the Theatre 3 Box Office, telephone 426-6870.

#### **Citadel Theatre**

*Continuing.* Harold Pinter's *The Lover*. Directed by Bartley Bard. Lunchtime theatre, Zeidler Hall. *Continuing.* George Bernard Shaw's *Pygmalion*. Featuring Kenneth Haigh and John Neville. Shctor Theatre. *From 12 January.* *Passengers* by Paddy

Campbell and William Skolnik. Rice Theatre. For ticket information and show times contact the Citadel Box Office, telephone 425-1820.

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### LECTURES AND SEMINARS

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#### *9 January, Monday*

##### **Plant Science Seminar**

1 p.m. "Inclusion bodies in virus infected plants," with speaker S. Masri. G208 Biological Sciences Building.

#### *10 January, Tuesday*

##### **Physics Colloquium**

3:30 p.m. "The development of the Greek oared warship, ca. 1500 BC to 300 BC," with speaker T.N. Ballin, Department of Classics. V120 Physics Building.

#### *12 January, Thursday*

##### **Classics Seminar**

4 p.m. "Sacred Roman landscapes," with speaker Fr. J. Fortier. 1-8 Humanities Centre.

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### NON-CREDIT COURSES

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#### **SWIMMING LESSONS**

Registrations are now being taken for the January program of swimming lessons. Classes are offered to adults and children in Beginning Swimming, Diving, Competitive Swimming, Fitness and Synchronized Swimming, and RLSS Life Saving. Brochures are available from the pool office and W1-34 Physical Education and Recreation Centre. Telephone: 432-3570.

#### **EARLY BIRD FITNESS**

The Department of Athletic Services is offering Early Bird Fitness Courses. One course takes place on Mondays and Wednesdays from 9 January to 29 March, and a second course is offered on Tuesdays and Thursdays from 10 January to 30 March. The sessions run from 7 a.m. to 8 a.m. The course fee for faculty and staff is \$35. Applications should be made to the Special Services Coordinator, Department of Athletic Services.

#### **SKATING COURSES**

The Department of Athletic Services is offering two skating courses. Skating Improvement takes place on Mondays from 2 p.m. to 3 p.m., and Learn to Figure Skate takes place on Wednesdays from 2 p.m. to 3 p.m. Both courses will be held from the second week in January until the end of February. The fee for parents and toddlers is \$35 and this fee includes both parent and child. The fee for staff and faculty is \$32.50, and the fee for students is \$30. Applications are available from the University Athletic Office, telephone 432-3365 or 432-3534.



*The courses listed below are offered under the auspices of the Faculty of Extension. Registrations may be made and information concerning the instructors and contents of the courses may be acquired at 228 Corbett Hall or by telephoning the number at the end of each listing.*

#### **WILLS AND ESTATE PLANNING**

A short course designed to inform individuals and families about the laws and taxes which affect wills and estate planning will be held beginning 30 January. Will preparation, estate administration, and estate planning are among the topics to be dealt with. Classes will be held from 7 p.m. to 10 p.m. on 30 January, 6 February, and 13 February. *Fee: \$35. Telephone: 432-5067 or 432-5066.*

#### **MANAGING INVESTMENTS**

The management of security investments will be examined in an evening course consisting of twelve classes. The course begins on 24 January. The following topics will be among those covered during the course: risk/reward factor, types of investments, types of securities, stock exchanges, bonds and preferreds, common stocks, and building and managing a portfolio. *Registration limit: thirty-five participants. Fee: \$75 (married couples may register for \$60 each and share one set of materials). Telephone: 432-5066 or 432-5067.*

#### **LEGAL, ACCOUNTING, AND MANAGEMENT SEMINARS**

Eight one-evening seminars will be held this winter for members of the construction industry. The seminars will begin on 30 January, and they will deal with the following topics: Personnel Management, Business Organization, Construction Contracts, Financial Accounting, Accounting and Income Tax Requirements, Construction Insurance and Bonding, Basic Contract Law, and Industrial Relations.

The seminars will be held from 7 p.m. to 10 p.m. each Monday from 30 January to 20 March. *Fee: \$120 for the program and \$30 each for the individual seminars. Telephone: 432-5066 or 432-5067.*

#### **INDIVIDUAL INCOME TAX RETURNS**

The Federal Income Tax Law as it applies to individuals will be discussed in a course beginning 31 January. Classes are from 7 p.m. to 9:30 p.m. on Tuesdays and Thursdays. *Fee: \$60. Telephone: 432-5066 or 432-5067.*

#### **MANAGERIAL EFFECTIVENESS**

A seminar designed to increase a manager's ability to create and maintain an effective organization will be held 23 and 24 January. The emphasis of this seminar will be on how an effective manager gets commitment to goals, collects and disseminates information, and manages conflict and change.

Increasing Managerial Effectiveness will be participatory in nature and will use case studies, role playing, and other experiential exercises. In addition, information will be presented through lectures and audio-visual presentation. The registration deadline is 16 January. *Fee: \$125. Telephone: 432-5066 or 432-5067.*

#### **ACCOUNTING SKILLS WORKSHOP**

A basic, practical, highly-concentrated workshop on accounting skills will be held from 17 to 19 January. Topics will include how an accounting system works; how to identify a business accounting transaction and its correct debit and credit entries; and how to use accounting data to identify financial problems. *Fee: \$195. Telephone: 432-5066 or 432-5067.*

#### **ALBERTA PLANNING ACT**

An interpretation of Alberta's new Planning Act is being presented 23 and 24 January. The seminar, organized by the Urban and Rural Planning Program section, will help make planners, surveyors, and others conversant with the new act. The registration deadline is 16 January. *Fee: \$90. Telephone: 432-2912.*

## **RESEARCH GRANTS**

#### **Samuel Bronfman Foundation**

*Donor: Charles Bronfman. Where tenable: Canadian universities. Level of study: Doctoral studies. Field of study: Business research. Value: \$6,000 (Doctoral Fellowship) \$9,500 (Senior Research Award). Number: Unspecified. Duration: One year. Conditions: Applicants must be full-time business faculty members of a Canadian university. Closing date: 15 March 1978. For further information and application forms contact: Jean-Paul Sallenave, Awards Chairman, Administrative Sciences Association of Canada, Faculty of Administration, University of Sherbrooke, Quebec J1K 2R1.*

## **SCHOLARSHIPS, FELLOWSHIPS, AND AWARDS**

*A special area in 252 Athabasca Hall has been set aside as an information centre on graduate scholarship competitions for study in Canada and abroad. Students may use this reference section during normal office hours.*

#### **Gerhard Herzberg Fellowships**

*Donor: The University of Regina. Where tenable: University of Regina. Level of study: Graduate. Field of study: Physical sciences. Value: \$7,000. Number: Variable. Duration: One year and renewable for a second year. Conditions: Applicants must have high academic qualifications and be enrolled or eligible to enroll as a candidate for a graduate degree in the basic physical sciences. Closing date: 1 April 1978. Further information and application forms should be requested from: The Dean, Faculty of Graduate Studies and Research, University of Regina, Regina, Canada S4S 0A2.*

#### **McGill Postgraduate Fellowships**

*Donor: McGill University. Where tenable: McGill University. Level of study: Postgraduate. Field of study: Open. Value: Up to \$5,300. Number: Twenty postgraduate fellowships and three special fellowships in Canadian Studies. Duration: Renewable up to five years. Conditions: Unspecified. Closing date: 1 February 1978. Further information and application forms should be requested from: Faculty of Graduate Studies and Research, Fellowships Office, 311 Dawson Hall, McGill University, 853 Sherbrooke Street West, Montreal, Quebec H3A 2T6.*

#### **Northern Scholarships and Faculty Grants**

*Donor: Institute for Northern Studies. Where tenable: University of Saskatchewan. Level of study: Graduate. Field of study: Research problems pertaining to northern Canada. Value: \$6,000 for a Musk-Ox Scholarship and \$5,000 for Northern Studies Scholarship. Number: Variable. Duration: One year with the possibility of renewal. Conditions: Unspecified. Closing date: 31 January 1978. Further information and application forms should be requested from: The Secretary, Institute of Northern Studies, University of Saskatchewan, Canada, S7N 0W0.*

## **POSITIONS VACANT**

#### **NON-ACADEMIC POSITIONS**

*To obtain further information on the following positions, please contact Personnel Services and Staff Relations, third floor SUB, telephone 432-5201. Please do not contact the department directly. Positions available as of 29 December.*

Clerk Typist I (\$322-\$348, half-time)—Division of Educational Research Services  
Clerk Typist II (\$644-\$751)—Computing Services; Office of Administrative Systems; Central Stores  
Library Clerk II (\$644-\$779, trust)—Faculty of Extension, Legal Resource Centre  
Public Relations Clerk I (\$644-\$779)—Public Relations  
Clerk Steno II (\$644-\$779)—Medical Laboratory Science; Electrical Engineering; Faculty of Extension  
Clerk Steno III (\$721-\$877)—Collège St. Jean (two positions); Entomology; Faculty of Business Administration and Commerce; Recreation Administration; Psychiatry; Civil Engineering; Faculty of Law  
Programmable Typewriter Operator II (\$751-\$914)—Personnel Services and Staff Relations  
Systems Control Clerk I (\$779-\$952)—Parking Services  
Secretary (\$811-\$994)—Computing Science; University Secretariat; Faculty of Nursing  
Public Relations Clerk III (\$843-\$1,034)—Public Relations  
Library Assistant II (\$843-\$1,034, trust)—Legal Resource Centre, Faculty of Extension  
Histology Technician (\$439-\$539, half-time)—Anatomy  
Storeman II (\$5.36-\$6.55 per hour)—Central Stores  
Technician I (\$843-\$1,034, trust)—Mechanical Engineering  
Technician I (\$843-\$1,034, term)—Mechanical Engineering  
Curriculum Technician I (\$843-\$1,034, trust)—Legal Resource Centre, Faculty of Extension  
Computer Operator I (\$877-\$1,078)—Office of Administrative Systems  
Offset Equipment Operator (\$877-\$1,078)—Printing Services, Duplicating  
Chemical Technologist I (\$952-\$1,173)—Faculty of Home Economics  
Biology Technologist I (\$952-\$1,173)—Genetics  
Electron Microscope Technician II (\$952-\$1,173)—Medicine  
Chemical Technician II/III (\$952-\$1,335)—Soil Science  
Plant Operator I (\$1,034-\$1,278)—Physical Plant

Administrative Assistant (\$1,078-\$1,335)—Physical Education  
 Machinist Technician III (\$1,224-\$1,520)—Chemistry  
 Programmer/Analyst II (\$1,125-\$1,393)—Faculty of Business Administration and Commerce  
 Programmer/Analyst II (\$1,125-\$1,393, trust)—Biochemistry  
 Programmer/Analyst III (\$1,335-\$1,660)—Mathematics  
 Carpenter Foreman (\$1,393-\$1,734)—Physical Plant

*The following is a list of currently available positions in the University of Alberta Libraries. The bulletin board postings in the Library Personnel Office, 516 Cameron Library, should be consulted for further information about position requirements and availability.*

Library Assistant I (\$751-\$914)—Cataloguing  
 Library Clerk II (\$696-\$843)—Cataloguing

## PERSONAL NOTICES

*All advertisements must be received by 9 a.m. the Friday prior to publication. Rate is 15 cents per word for the first week and 5 cents per word for subsequent weeks ordered before the next deadline. Minimum charge is \$1. Ads must be paid in advance and are accepted at the discretion of the Editor. We regret that no ads can be taken over the telephone. For order forms or further information, telephone 432-4991.*

### Accommodations available

Luxury two-bedroom condominium in Kihei, Maui; available from 1 April; \$35 per night for four. 478-6077; 475-7762

For rent—furnished family house in Belgravia 1 January to 30 June. \$400 monthly. Telephone 432-4617 or 436-4980.

For rent—1 July 1978 - 31 July 1979. Malmo, four-bedroom split-level, furnished; 1½ baths, rumpus room, two fireplaces. Major bus routes one block; near all schools; two miles to campus. \$650. 435-5433.

For sale—unique bi-level, Aspen Gardens. Shake roof, large deck, double garage. Excellent transportation to University. \$89,500. For appointment, telephone Ken Smith, Potter Realty, 436-3050; residence 434-3783.

Male to share two-bedroom apartment. Partly furnished. \$150. 432-7197 after six.

For sale—\$34,900. University area. One-bedroom condominium apartment; excellent condition. February possession. Telephone Rita Butt, Potter Realty, 436-3050; 435-7629 residence.

Groat area—large house. February, for two years. Reasonable rent for caring family. 455-2460.

For rent—walk to campus. Large two-bedroom house, main floor; appliances, drapes, garage. Available immediately or 15 January. 435-7735.

For sale—Ermineskin three-bedroom bungalow featuring sunken family room, brick fireplace, upgraded carpeting; family-size kitchen with ideal cabinets for gourmet cooks. For appointment telephone June Hill 436-5250; residence 433-2396; or Dave Sutherland 452-6491, residence. Spencer Real Estate Ltd.

Paris, central—furnished apartment. 1 February for five months; also 1 September for ten months. Responsible individual or couple. References. Moderate rent. 433-1716.

For sale—on Devon Highway, Woodbend Road, only sixteen miles from city. Large two-storey open-beam Lindale home on eight treed acres; living, dining, and family room, three bedrooms, two bathrooms, sun deck and balcony, double garage. Quarter mile off pavement. Frank Sobernig, 455-4135; 452-2825. Weber Bros.

### Accommodation wanted

I have two clients seriously interested in buying a three- or four-bedroom home in the University area. Possession date negotiable. Price over \$50,000. If you are considering selling, please telephone Mrs. Jeanne Eid, residence, 434-5780; Distacom 426-5880 (number 837) or Spencer Real Estate Ltd. 436-5250.

Accommodation wanted—chartered accountant, wife and two children emigrating from England need three-bedroom furnished accommodation for six or eight months from February 1978. Hillerby, 2, Fairlawn, Swindon, Wiltshire, England.

Physician wishes to rent home for twelve-eighteen months from March 1978. Telephone Dr. Orford at 435-8075, or write Box 654 University Post Office.

### Automobiles and accessories

1968 IHC Travelall stationwagon, V8 automatic; power; radio. \$450. 478-4241.

### Goods and services

Plumbing—for estimates on basement bathrooms, repairs, gasfitting, etc., call 465-7079.

Typing—theses, etc., Mrs. Empey; 456-1886.

Custom carpentry—finishing, cabinets, stairs, railings, renovations, etc. All workmanship guaranteed. Hoyt Homes Ltd. 432-7918 after six.

Typing speed and accuracy are our specialties. 458-8808.

Snow-clearing, yard maintenance. Free estimates. Seasonal or yearly contracts available. Telephone Dan at 462-2878 or 474-6921.

Dressmaking, alterations. Telephone Elizabeth 428-6162; Rosemary 488-7144.

Imagine owning some Medieval imagery. Selling elegantly framed brass rubbings from England. Shown by appointment. 434-9784.

Expert thesis typing. Linda, 436-7647.

Gerlinger's fireplace wood: birch, poplar or mixed. 426-5410.

Interested in having your area cleared of snow this winter? Telephone 439-3531; 462-2878.

Wanted—quality shotgun, double 12 gauge; also rifle (6 mm-270). 435-8467 evenings.

Cross-country skis; two pair, 180 cm, poles, bindings, leather "Tyrol" boots, sizes 7½, 8. Very reasonable 435-2412.

Piano lessons and theory instruction. Reasonable rates. Close to Whyte Avenue. Have time for four more students beginning January. 439-2662.

White circular dining table with fibreglass chairs; suitable for modern apartment. \$150. Lyndall, 432-2418; 439-4056.

High-quality Rockwell table saw complete with motor and blade. \$250 firm. 436-1879.

Cream muskrat coat (to mid-calf), racoon trim. 10-12. One year old. \$1,350 new. Offers? 452-3144 Saturday daytime.

Charge car battery anywhere without an outlet: compact generator also gives 300W of ordinary house current—runs TV or hi-fi outdoors. Like new. \$350 firm. 436-1879 leave message.

Excellent typing. Telephone Cecilia, 427-4222.

The Chest Maker—handcrafted cedar chests. Telephone 439-5248.

We buy old TVs, working or not. 478-4241.

Recorder lessons by experienced teacher. Adults and children. All levels. Telephone 434-4734.

Child care in my home; part, full time; four years and older. 439-4598.

Sofa and chair, \$125; lamp, \$20; TV stand, \$10; three-shelf stand, \$10. 482-6685.

Expert typing—theses, etc. Telephone 455-0641.



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